METALLURGIA—Index to Volume LIV

Published by the Kennedy Press Ltd., 31 King Street West, Manchester 3

JULY—DECEMBER 1956

Page

LEADERS

Atom Age, The 211
Fuel Cuts 261. 273
German Competition 55–56
H.R.H. The Duke of Edinburgh's Study Conference 1–2
Long-Term Scrap Prospects .. 107–108
Plant Scale Research 159

ARTICLES

A

Abstracting—Science 137
Acheson Centenary 183–186
Adherence Study, Enamel .. 275
Air Conditioning System for Mine 122
Al-Si-Cu-Mg Casting Alloys, The Effect of Composition on the Mechanical Properties of. By M. G. Gittins and W. E. Mew 71–76
Aluminium Busbar Alloy 30
Aluminium Church Roof, Fully Supported 84
Aluminium Conductor Cable Jointing 274–275
Aluminium Reservoir Roofs .. 289–290
Ammonia, The Embrittlement of Tungsten by. By Dr. G. L. Davis 18–20
Annealing Motor Laminations. 287–288
Anti-Vibration Levelling Mounts for Machine Tools 121–122
Automation in the United States 288

B

Barium Titanate Transducers, New. G.E.C. Accelerometers and Strain Gauges for Vibration Testing 27–28
Bessemer, The Inventions of, in relation to Non-Ferrous Metals. By Prof. H. O'Neill .. 269–273
British Cast Iron Research Association. By Dr. J. G. Pearce, O.B.E. 163–165
British Ceramic Research Association. By A. E. Dodd 161–162
British Iron and Steel Research Association 166–172, 182
British Non-Ferrous Metals Research Association, The Equipment of the. By E. C. Mantle 173–177, 182
British Steel Castings Research Association. By Dr. A. H. Sully 178–182
Busbars, Aluminium Alloy for 30

C

Cable Jointing, Aluminium Conductor 274–275
Calder Hall Goes on Load .. 223–226
Carborundum and Graphite Pioneer—E. G. Acheson .. 183–186
Castings (Steel), Rare Earths in. By W. J. Jackson 233–238
Ceramic Cutting Tools 31–32
Chromium Steels (Cast 11–14%), The Metallographic Structure of. By A. Faerden 3–10
Closed Circuit Equipment, Remote Observation Facilitated by. 213–216
Coal, Importance of, Stressed in Two O.E.E.C. Reports 25–26
Cogging Roll, Welding Repair of 286
Coke Research Centre 311
Cold Strip Mill (High-Speed, Tandem), Electrical Equipment for a. B.T.H. Installation at Velindre 283–286
Composition: The Effect of, on the Mechanical Properties of Al-Si-Cu-Mg Casting Alloys. By M. G. Gittins and W. E. Mew 71–76
Conductor Cable Jointing, Aluminium 274–275
Continuous Casting of Steel at Barrow 259
Continuous Gas Carburising of Gears 118–121
Co-operative Research. Survey of Activities of the Research Associations 161–182
Cutting Tools, Ceramic 31–32

D

D'Elhuyar's Work on Tungsten and Platinum. By M. Schofield 239–240
Dud Dudley. By E. N. Simons 21–23

E

Electrical Equipment for a High-Speed Tandem Cold Strip Mill. 283–286
Electric Spark Machining Process, Some Observations with the. By Dr. G. R. Wilms and J. B. Wade 263–268
Electro-Chemical Engineering Company's New Factory at Woking 115–117
Embrittlement of Tungsten by Ammonia. By Dr. G. L. Davis 18–20
Enamel Adherence Study .. 275
Energy Requirements, Europe's Growing. Importance of Coal Stressed in Two O.E.E.C. Reports 25–26
E.N.V. Engineering Co., Ltd., New Installation at 118–121
Europe's Growing Energy Requirements. 25–26

F

Fatigue of Metals in Liquid Metal Environments, a Preliminary Study of the. By Dr. J. W. Martin and G. C. Smith 227–232, 238
Foundry Services' Open Day .. 241–244
"Functions of a Professional Institute." Dr. A. D. Merriman's Address to the Institute of Ceramics 24–25
Furnace Atmosphere and Nickel Content (The Effect of) on the Scale Formed on Nickel Steels. By Dr. K. Sachs 109–114
Furnaces, Rotary Melting .. 29–30

G

Gas Carburising (Continuous) of Gears 118–121
Gas, The Efficient Use of, in Industry. By A. E. Tyrell .. 217–221
Gears, Continuous Gas Carburising of 118–121
Graphite and Carborundum Pioneer—E. G. Acheson .. 183–186
G. W. B.-Tagliafferi Unit in Alberta 83–84

H

Hard Surfacing Scraper Blades, Twin-Arc Welding for 312
H.F. Heating Aids Production of Hydraulic Gear 131–132

I

Institute of Ceramics, Dr. A. D. Merriman's Address 24–25
Iron (Pure), The Effect of Impurities on the Properties of 123–127

L

Laminations (Motor), Annealing 287–288
Levelling Mounts (Anti-Vibration) for Machine Tools .. 121–122
Liquid Metal Environments, a Preliminary Study of the Fatigue of Metals in. By Dr. J. W. Martin and G. C. Smith 227–232, 238

M

Machine Tools, Anti-Vibration Levelling Mounts for 121–122
Magnetic Measurements. By C. E. Webb 57–66
Manpower, Scientific 291
Marker Movement in Scale Layers. By Dr. K. Sachs .. 11–17
Mechanical Engineering Research 1955 85–86
Mechanical Properties of Al-Si-Cu-Mg Casting Alloys, The Effect of Composition on the. By M. G. Gittins and W. E. Mew 71–76
Metallographic Structure of Cast 11–14% Chromium Steels. By A. Faerden 3–10
Metals and Powder Metallurgy. By H. W. Greenwood 187–188
Melting Furnace (British) in Canada. G.W.B.-Tagliaferri Unit 83–84
Melting Furnaces (Rotary) .. 29–30
Mill Building Programme (£650,000) at Samuel Fox .. 23–24
Mine Air Conditioning System, Novel 122
Motor Laminations, Annealing 287–288
Mounts (Anti-Vibration Levelling) for Machine Tools 121–122

N

Nickel Alloy Welding Film .. 132
Nickel Content and Furnace Atmosphere (The Effect of) on the Scale Formed on Nickel Steels. By Dr. K. Sachs .. 109–114
Nimonic 100 290–291
Non-Ferrous Metals, The Inventions of Bessemer in relation to. By Prof. H. O'Neill .. 269–273
Nuclear Power Station, World's First 223–226

Page

O

Organising for Research. By E. I. Brimelow 276–282
Oxygen in Steelmaking. New Tonnage Plant at Margam Inaugurated 133–137

P

Platinum and Tungsten, D'Elhuyar's Work on. Bicentenary of a Brilliant Metallurgist. By M. Schofield 239–240
Powder Metallurgy, The Fundamental Properties of Metals and. By H. W. Greenwood .. 187–188
Pure Iron, The Effect of Impurities on the Properties of.. 123–127

R

Rare Earths in Steel Castings. By W. J. Jackson 233–238
Research, Co-operative. 161–182
Research, Organising for. By E. I. Brimelow 276–282
Reservoir Roofs, Aluminium .. 289–290
Rhenium, Properties of 127
Rotary Melting Furnaces.. .. 29–30

S

Scale Formed in Nickel Steels, The Effect of Nickel Content and Furnace Atmosphere on the. By Dr. K. Sachs 109–114
Scale Layers, Marker Movement in. By Dr. K. Sachs 11–17
Scraper Blades, Twin-Arc Welding for Hard Surfacing .. 312
Shell-Moulding Foundry, Installation of Rotary Melting Furnaces in 29–30
Scientific Manpower 291
Spark (Electric) Machining Process, Some Observations with the. By Dr. G. R. Wilms and J. B. Wade 263–268
Special Alloys, Production of. New Telcon Works at Crawley 77–82
Steel Castings, Rare Earths in. By W. J. Jackson 233–238
Steel Foundry in 1890, Starting Up a. By E. N. Simons .. 128–131
Steelmaking, A Hundred Years of. 67–70
Steelmaking, Oxygen in 133–137

T

Tandem Cold Strip Mill (High-Speed), Electrical Equipment for a. B.T.H. Installation at Velindre 283–286
Telcon Works (New) at Crawley. Production of Special Alloys.. 77–82
Television, The Industrial Application of 213–216
Titanium Ductility, Restoring.. 17
Transducers, New Barium Titanate. G.E.C. Accelerometers and Strain Gauges for Vibration Testing 27–28
Tungsten and Platinum, D'Elhuyar's Work on. By M. Schofield 239–240
Tungsten, The Embrittlement of, by Ammonia. By Dr. G. L. Davis 18–20
Twin-Arc Welding for Hard Surfacing Scraper Blades .. 312

U

United States, Automation in the 288

Page

V

Vibration Testing. New Barium Titanate Transducers 27–28

W

Welding (Nickel Alloy) Film .. 132
Welding Repair of Cogging Roll 286
Welding (Twin-Arc) for Hard Surfacing Scraper Blades .. 312
Work Study, Introduction to .. 10

Z

Zinc Development Association Report 254

CORRESPONDENCE

"An Unusual Fatigue Failure." J. H. Slagg and E. Wood .. 260

CURRENT LITERATURE

Reviews

"Arc Welding of Aluminium." The Aluminium Development Association 40–41
Bibliography of Hardness and Hardness Testing, 1937–1955. Industrial Diamond Information Bureau 143
B.C.A.S. Handbook of Pneumatic Equipment. British Compressed Air Society .. 91
B.C.U.R.A. Annual Report, 1955. British Coal Utilisation Research Association 143
"Coal Industry in Europe." H.M. Stationery Office 26
"Corrosion and its Prevention at Bimetallic Contacts." H.M. Stationery Office 91
"Electric Melting and Smelting Practice." A. G. E. Robiette. Charles Griffin & Co., Ltd. .. 195
"Europe's Growing Needs of Energy—How Can They Be Met?" H.M. Stationery Office 25–26
"Foundry Ventilation and Dust Control." British Cast Iron Research Association 40
"Outline of Work Study—Part I: Introduction." British Institute of Management .. 10
"Oxidation Resistant Silicon Aluminium Steels." E. A. Brandes. Fulmer Research Institute 298
"Running and Gating of Sand Castings, The." R. W. Ruddle. Institute of Metals 298
Shell Moulding Process, Second Report on. J. L. Rice, Miscellaneous Publication No. 476 of BNFMRA. The Association of Bronze and Brass Founders 298–299
Spectrochemical Abstracts Vol. IV, 1946–1951. Hilger and Watts, Ltd. 91
"Survey of a Cross-Section of the Electroplating Industry." British Non-Ferrous Metals Research Association 41
Zinc Development Association Report 254
Trade Publications .. 41–42, 91–92, 143–144, 195–196, 299–300

RECENT DEVELOPMENTS IN MATERIALS, TOOLS AND EQUIPMENT

Page

Argonaut Equipment, Automatic. The British Oxygen Co., Ltd. 141–142
Automatic Argonaut Equipment. The British Oxygen Co., Ltd. 141–142
Automatic Degreasing and Drying. The Electro-Chemical Engineering Co., Ltd. 89
"Bremsstrahlung" Thickness Gauge. Baldwin Instrument Co., Ltd. 194
Bright Cadmium Plating. Electrochemical Engineering Co., Ltd. 36
Consotrol Controller, Model 58. Foxboro-Yoxall, Ltd. 36–37
Constant Potential Rectifier. The British Oxygen Co., Ltd. 295–296
Cutting Oils, New. Manchester Oil Refinery (Sales), Ltd. .. 141
Degreasing and Drying, Automatic. The Electro-Chemical Engineering Co., Ltd. 89
Drills, Industrial, New Range of. Wolf Electric Tools, Ltd. .. 194
Dual Portable Power Point. Wolf Electric Tools, Ltd. .. 192
Dye Penetrant Flaw Detection Inks in Pressurised Cans. Manchester Oil Refinery (Sales), Ltd. 39
Endothermic Generator with Automatic Ratio Control. Ipsen Industries, Ltd. 90
Fluorescent Inspection Lamp. Lexington Products, Ltd. .. 295
Foam Fire Fighter. The Pyrene Co., Ltd. 89–90
Fume Scrubbing and Absorption Tower. Turner and Brown, Ltd. 38
Gun (New) for Philips Stud Welding Process. Philips Electrical, Ltd. 250
High Speed Strip Chart Recorder. Honeywell-Brown, Ltd. .. 193–194
Induction Heater, 7 kW. The General Electric Co., Ltd. .. 296
Liquid Level Switch. Teddington Industrial Equipment, Ltd. .. 250
Low Shrinkage Film. The Graphic Arts Division, Kodak, Ltd. 90
Metal Rectifier Welding Set. Quasi-Arc, Ltd. 192
Nucleonic Level Indicator. Baldwin Instrument Co., Ltd. 249
Oil and Water Separator for Air Lines. Alfred Bullows and Sons, Ltd. 38
Overhead Radiant Heater. The General Electric Co., Ltd. .. 297
Portable Gear Profile Measurer. The David Brown Tool Division 142
Portable Vacuum Recovery Unit. Quasi-Arc, Ltd. 39
Programme Temperature Controller. Ether, Ltd. 295
Quasi-Arc Electrode, New. Quasi-Arc, Ltd. 297
Sigma Spot Welding. Quasi-Arc, Ltd. 194
Solid Degassing Agent. The British Oxygen Co., Ltd. .. 249
Spot/Repeat Welders. Philips Electrical, Ltd. 192–193
Stepless Controller. West Instrument, Ltd. 39
Stereoscopic Low Power Microscope. Carl Zeiss. U.K. Agents: Degenhardt and Co., Ltd. 38–39
Stucco Snaprib Aluminium Building Sheet. Northern Aluminium Co., Ltd. 297

Page

Stud Welding Attachment. Crompton-Parkinson, Ltd. .. 37–38
Thixotropic Paint. Allweather Paints, Ltd. 193
Tool and Die Handler. Matling, Ltd. 296–297
Vacuum Pump, Compact. Pulsometer Engineering Co., Ltd... 37
Welding and Cutting Blowpipes. The British Oxygen Co., Ltd. 193
Wheelabrator Steel Shot. Tilghmans, Ltd. 249–250

LABORATORY METHODS

Aluminium Bronze, The Polarographic Determination of Zinc in. By D. R. Curry and Miss J. T. King-Cox 204–206
Cast Aluminium Rotor Windings for Squirrel-Cage Motors, A Magneto-Electric Method for Detecting Defects in. By A. M. Armour and J. W. Walley 43–46
Cathode Ray Polarography. By J. W. Martin and J. V. Westwood 305–311
Chemical Research Laboratory Report for 1955 54
Crystal Lattices and Their Imperfections, Direct Study of.. 150
Direct-Reading Phase Counter for Metallurgical Specimens. By R. J. M. Payne 157–158
Etching Reagent (A New) for Steel and Cast Iron. By B. V. Guellard 93–96, 106
Fatigue Limit or Endurance Limit of Metals in Reverse Bending, A Rapid Method of Estimating the. By Dr. J. McKeown.. .. .. .. 151–156, 158
Flame Photometric Determination of Lithium Using Infra-Red Barrier Layer Cells. By H. J. Allsopp and P. M. Wingfield 255–259
Fracture Surfaces, A Precision Universal Stage for the Microscopical Examination of. By J. F. McNeil 207–210
Grinding and Polishing Machine (New, Automatic) for Metallurgical Specimens 52–53
Hilger Direct Reading Attachment, The Applications of the, to the Spectrographic Analysis of Hiduminium RR.50 Type Alloy. By E. C. Mills and S. E. Hermon 201–203
Infra-Red Barrier Layer Cells, The Flame Photometric Determination of Lithium Using. By H. J. Allsopp and P. M. Wingfield 255–259
Liquid-Liquid Extraction Procedures in Inorganic Analysis. By Dr. T. S. West.. 47–51, 103–106
Lithium, The Flame Photometric Determination of, Using Infra-Red Barrier Layer Cells. By H. J. Allsopp and P. M. Wingfield 255–259
Low Carbon Ferro-Chrome, The Determination of Phosphorus in. By B. Bagshawe and A. L. Pill 251–254
Magneto-Electric Method for Detecting Defects in Cast Aluminium Rotor Windings for Squirrel-Cage Motors. By A. M. Armour and J. W. Walley 43–46
Metallurgical Analysis: Liquid-Liquid Solvent Extraction Techniques in Inorganic Analysis, with particular reference to. By Dr. T. S. West 47–51, 103–106
Metallurgical Specimens, A Direct-Reading Phase Counter for. By R. J. M. Payne .. 157–158
Metallurgical Specimens, New Automatic Grinding and Polishing Machine for 52–53
Microscopical Examination of Fracture Surfaces, A Precision Universal Stage for the. By J. F. McNeil 207–210
Non-Destructive Microchemical Method of Sorting Steels. By W. R. Nall and R. Scholey .. 97–102
Particle Size Determination in Powder Metallurgy. By L. A. Phelps 197–200
Phase Counter (Direct-Reading) for Metallurgical Specimens. By R. J. M. Payne 157–158
Phosphorus, The Determination of, in Low Carbon Ferro-Chrome. By B. Bagshawe and A. L. Pill 251–254
Polarographic Determination of Zinc in Aluminium Bronze. By D. R. Curry and Miss J. T. King-Cox 204–206
Polarography, Cathode Ray. By J. W. Martin and J. V. Westwood 305–311
Polishing and Grinding Machine (New, Automatic) for Metallurgical Specimens 52–53
Powder Metallurgy, Particle Size Determination in. By L. A. Phelps 197–200
Precision Universal Stage for the Microscopical Examination of Fracture Surfaces. By J. F. McNeil 207–210
Reverse Bending, A Rapid Method of Estimating the Fatigue Limit or Endurance Limit of Metals in. By Dr. J. McKeown.. .. .. .. 151–156, 158
Rolling Defects in Steel Sheet, The Detection of. By A. M. Armour 301–304
Rotor Windings (Cast Aluminium) for Squirrel-Cage Motors, A Magneto-Electric Method for Detecting Defects in. By A. M. Armour and J. W. Walley 43–46
Sodium Bisulphite. A New Etching Reagent for Steel and Cast Iron. By B. V. Guellard 93–96, 106
Spectrographic Analysis of Hiduminium RR.50 Type Alloy, The Application of the Hilger Direct Reading Attachment to the. By E. C. Mills and S. E. Hermon 201–203
Spectrophotometer (Unicam S.P. 600), An Examination of the. By D. R. Curry and P. H. Scholes 145–149
Squirrel-Cage Motors, A Magneto-Electric Method for Detecting Defects in Cast Aluminium Rotor Windings for. By A. M. Armour and J. W. Walley .. 43–46
Steels, A Non-Destructive Microchemical Method of Sorting. By W. R. Nall and R. Scholey 97–102
Steel Sheet, The Detection of Rolling Defects in. By A. M. Armour 301–304
Unicam S.P.600 Spectrophotometer, An Examination of the. By D. R. Curry and P. H. Scholes 145–149
Zinc, The Polarographic Determination of, in Aluminium Bronze. By D. R. Curry and Miss J. T. King-Cox 204–206

NEWS AND ANNOUNCEMENTS

ACC-Vickers-Babcock (Private), Ltd. 291
Acheson Colloiden, N. V. .. 66
Aircraft Production Problems Conference 293
Alumina Expansion in Jamaica 56
Aluminium Church Roof, Fully Supported 84
Aluminium Goods, Export of .. 34
Analytical Chemistry Congress, Modern Industrial 189
Appleby-Frodingham Steel Co., orders from Metropolitan-Vickers Electrical Co., Ltd., electrical equipment worth about £350,000 246–247
Arc Furnace (80 Ton) for Scotland 70
Arc Furnaces for Carbon Steel Ingots 66
Arc Furnaces Replace Open Hearths 244
Arctic Hydroelectric Plant .. 191
Automatic Controls Pioneer Visits U.K. 56
Automatic Triple Drawbench, 273
Axle Forge, Massive Hammer Block Casting for 244
Babcock House 294
Beilby Memorial Awards 190
Birlec Ten Year Plan 293
B.I.S.R.A's Sheffield Laboratories, Open Days at 86
Blackman Export Co., Ltd. .. 246
Blast Furnace Contract 247
"Bridge Across Space," Film .. 254
Brightside Mill Order 117
British Cast Iron Research Association and National Industrial Fuel Efficiency Service .. 34
British Chemical Standards, New 46
British Engineers Study Soviet Training 190
British Oxygen Brinsworth Expansion 132
British Oxygen Research Fellowships 189
British Oxygen's Visual Aids to Industry 259
British Standards, New 222
B.S.I. Annual General Meeting 206
Carbide Tools, A New Film on.. 210
Casting (Massive Hammer Block) for Axle Forge 244
Cast Iron Cutting Operation, 240
Chemical Engineering, 1958 European Convention of .. 189
Chemical Research Laboratory Report for 1955 54
Chemistry Congress, Modern Industrial Analytical.. 189
Coke Oven Order 268
Coke Research Centre 311
Cold Forging of Steel 139
Continuous Casting of Steel at Barrow 259
Convention of Chemical Sciences, 1956 87
Copper Goods, Export of .. 33
Copper Stocks (Government) Disposal 87–88

	Page
Corrosion Essay Competition	138, 292–293
Corrosion Meeting	138
Cutting Cast Iron Operation,	240
Degreasing Discussion	293
Die Casting Techniques, Industrial Designers See	66
Direction of Research Establishments, The	34–35
Drawbench, New Automatic Triple	273
Dustbins, Continuous Production of	240
Dutch Acheson Plant, New	66
Efco-Edwards Vacuum Metallurgy, Ltd.	88
Engineering, Marine, Welding and Nuclear Energy Exhibition	245–246
Engineering Sandwich Course	87
European Convention of Chemical Engineering, 1958	189
Fuel Economy Plant Investment	189
Fulmer Research Institute	246
Furnace Agreement, Anglo-U.S.	54
General Refractories Bursary	189
German Contract for Wild-Barfield	188
Graduates, Opportunities for	88
Grey Iron, Thermal Conductivity	149
Hammer Block Casting (Massive) for Axle Forge	244
Herbert (Sir Alfred) Travelling Scholarship	245
H.F. Iron Melting	35
High Vacuum Melting	247
Howitt Committee Report	34
Hungarian Automatic Foundry	84
Hydro Electric Scheme, New Peribonka	200
Hydroelectric Plant, Arctic	191
Industrial Designers See Die Casting Techniques	66
Institute of Ceramics A.G.M.	32
Institute of Metals	87, 292
Institute of Physics A.G.M.	139–140
Institution of Metallurgists Refresher Course	312
International Non-Destructive Testing Meeting	293
International Tin Council Meeting, First	102
International Wrought Non-Ferrous Metals Council Meeting	268
Iron and Steel Import Duties, Further Suspension of	139
Iron and Steel Institute	245
Jamaica Alumina Expansion	56
Johnson, Matthey's new Associate Company	246
Kemano Tunnel Obstruction	140
Kiln, New Tunnel, at Worksop	114
Leoben Light Metals Conference	140
Libraries of Great Manchester	102
Library Scholarships	247
Light Alloy Conveyor Buckets for Coal and Coke	35
Light Metals Conference	140
Lincoln Electric Company	189
Management Education	35
Marine Shafting Export Order	140
Metrovick Ex-Apprentices Register	82
Microchemistry, Symposium on, 1958	190
Mill Building Programme (£650,000) at Samuel Fox	23–24
Molybdenum, Protective Coatings for	117
Mond Magazine	247
Mond Nickel Plant at Clydach	293–294
M-V Drive for Scunthorpe Plate Mill	246–247
National Industrial Fuel Efficiency Service and British Cast Iron Research Association	34
Nickel Alloy Welding Film	132
Nimonic 100	290–291
"Noral News." International Magazine Award	26
Nottingham University	88
Nu-Swift American Link-Up	88
Open Hearths, Arc Furnaces Replace	244
Ore Handling Plant for Belgium	200
Oxford Study Conference	140
Pakistan Welding Supervision Contract	304
Peribonka Hydro Electric Scheme, New	200
Personal News	2, 56, 108, 191, 247–248, 294
Physical Metallurgy, Post-Graduate Courses in	138
Pictures of an Industry	35
Plastics Abstracts Service	102
Plate Finishing Mill, Four-High	165
Post-Graduate Courses in Physical Metallurgy	138
Powder Metallurgy Course	138–139
Practical X-Ray Crystallography Course	87
Precision Casting, International Conference on	206
Protective Coatings for Molybdenum	117
Quasi-Arc Patent Specification	88
Quality Positional Welding Electrode. Quasi-Arc, Ltd.	142
Queen Anne Furnace, Bigger	122
Radiographic Installation, New	53
Research Establishments, The Direction of	34–35
Roll Turners, Lectures for	127
Samuel Fox, £650,000 Mill Building Programme at	23–24
S.C.I. Corrosion Essay Competition Results	138
Science Abstracting	137
Self-Controlling Silver Etch	149
S.G. Iron Licencees	182
Sheet Stockholding Scheme	246
Silver Etch, Self Controlling	149
Smithson Research Fellowship	190
Society of Instrument Technology A.G.M.	46
Soviet Training, British Engineers Study	190
Spectroscopy Symposium	245
Standards, British	46, 222
Steel Experts Visit Ural Plants	33–34
Symposium on Microchemistry 1958	190
Thermal Conductivity of Grey Iron	149
T.I. Cycle Subsidiary	206
Titanium Ductility, Restoring	17
Titanium, European and U.S. Experts Meet	246
Titanium Ingots, 6,000 lb.	137
Titanium's Future	188
Travelling Scholarship, Sir Alfred Herbert	245
Triple Drawbench, New Automatic	273
Tunnel Kiln (New) at Workshop	114
United Steel's New Film—*Steel Road*	140
Ural Plants, Steel Experts Visit	33–34
Welded Pressure Vessel Steels Symposium	33
Welded Structural Design Course	87
Welding Electrode, Quality Positional. Quasi-Arc, Ltd.	142
Welding Engineers, A Conference on the Functions and Education of	33
Welding Supervision, Ltd. awarded Pakistan Contract	304
Welding Tuition Charges, Increased	190
Wickman Banner Lane Extension	190
Wiggin Purchase Hereford Plant	33
Wild-Barfield, German Contract for	188
X-Ray Crystallography Course, Practical	87
Zinc Development Association Report	254

OBITUARY

Dr. David Binnie	248
Mr. Basil Gray	248
Brigadier-General Wade H. Hayes, O.B.E.	191
Mr. J. Henderson	294
Mr. J. S. Hollings, C.B.E.	2
Professor Dr. Georg Masing	248
Mr. N. D. Ridsdale	108
Dr. A. E. J. Vickers	191

AUTHOR INDEX

Allsopp, H. J., and Wingfield, P. M.	255–259
Armour, A. M.	301–304
Armour, A. M., and Walley, J. W.	43–46
Bagshawe, B., and Pill, A. L.	251–254
Brimelow, E. I.	276–282
Curry, D. R., and King-Cox, J. T.	204–206
Curry, D. R., and Scholes, P. H.	145–149
Davis, G. L.	18–20
Dodd, A. E.	161–162
Faerden, A.	3–10
Gittins, M. G., and Mew, W. E.	71–76
Greenwood, H. W.	187–188
Guellard, B. V.	93–96, 106
Hermon, S. E., and Mills, E. C.	201–203
Jackson, W. J.	233–238
King-Cox, J. T., and Curry, D. R.	204–206
Mantle, E. C.	173–177, 182
Martin, J. W., and Smith, G. C.	227–232, 238
Martin, J. W., and Westwood, J. V.	305–311
McKeown, J.	151–156, 158
McNeil, J. F.	207–210
Mew, W. E., and Gittins, M. G.	71–76
Mills, E. C., and Hermon, S. E.	201–203
Nall, W. R., and Scholey, R.	97–102
O'Neill, H.	269–273
Payne, R. J. M.	157–158
Pearce, J. G.	163–165
Phelps, L. A.	197–200
Pill, A. L., and Bagshawe, B.	251–254
Sachs, K.	11–17, 109–114
Schofield, M.	239–240
Scholes, P. H., and Curry, D. R.	145–149
Scholey, R., and Nall, W. R.	97–102
Simons, E. N.	21–23, 128–131
Smith, G. C., and Martin, J. W.	227–232, 238
Sully, A. H.	178–182
Tyrell, A. E.	217–221
Wade, J. B., and Wilms, G. R.	263–268
Walley, J. W., and Armour, A. M.	43–46
Webb, C. E.	57–66
West, T. S.	47–51, 103–106
Westwood, J. V., and Martin, J. W.	305–311
Wilms, G. R., and Wade, J. B.	263–268
Wingfield, P. M., and Allsopp, H. J.	255–259

Page

33
304
190
190
53
188
87
254

248
248

91
94
2
48
08
91

59
4

6
4
2

6
0
0
2
0
6
8
6
4
1